

Remarks

Claims 1 to 14 are pending in this application of which claims 1, 7, 8 and 14 are in independent form. Claims 7, 8 and 14 are amended.

Applicants note that the Examiner did not initial United States Patent 4,612,575 in the copy of applicants' information disclosure statement submitted on December 6, 2001 that was attached to the Action.

Consideration of this reference as well as the references submitted with the Information Disclosure Statements of November 20, 2000 and October 15, 2004 are respectfully requested.

In paragraphs 1 and 2 of the Action, the Office rejected claims 1 to 3, 5 to 6, 8 to 10, and 12 to 13 as being anticipated by GB 2,116,397 to Wilson.

The view was expressed that Wilson's motion sensing device (10) inherently discloses an angular sensor such as an inertial sensor for detecting movement of the camera for correction. In particular, the view was expressed that since the camera is mounted on a vehicle or aircraft, it is inherent that the motion sensing unit detects the movement of the carrier.

The Office also stated that Wilson discloses that the output of the motion sensing unit as well as the output of the camera is stored in a memory (17) which can correct for stabilization during imaging or at a later time (page 1, second column, lines 90 to 98; and page 2, first column, lines 42 to 62). The view was expressed that both image data and data from the motion sensing unit are inherently delayed since they both are stored in the memory for correction.

Wilson discloses a video picture stabilizing system in which video signals and motion signals of a motion sensing unit are stored in a memory 17. Both types of data, that is, the output video signals and the motion signals can be, due to the storage in memory 17, processed with a time delay. Wilson discloses that the original picture position error can be corrected by varying the delay between reading into and out of a video store in a suitable manner (page 2, left column, lines 42 to 61). Thus, a "time delay" is created due to the storage in the memory. Claim 1 requires that:

"detecting said flight movements of said carrier as angular data with an inertial sensor and said inertial sensor being adapted to supply said angular data with a time delay; and,

correcting said image data in accordance with said detected angular data with said image data being time delayed by a time interval relative to said detected angular data." (emphasis added)

Amended claim 8 contains similar language.

Accordingly, the inertial sensor itself provides the angular data with a time delay. That means, the angular data is already gathered with a time delay by this inertial sensor. The image data is then corrected by a time delay of the image data. This correction occurs by means of a time delay of the image data by a time interval whose extent is chosen dependent on ("relative to") the angular data. The time delay of the image data relative to the angular data (which, in turn, is provided by the inertial sensor with a time delay) allows compensating for the time delay of the inertial sensor which is caused by its

limited bandwidth. As a result, stabilization is obtained that is as accurate as possible.

A correction in both directions (direction of flight as well as direction traverse to flight) can thus be achieved with the method of the present invention.

Accordingly, Wilson "time delay" differs significantly from that of the presently claimed invention.

In addition, Wilson does not provide any information as to what type of "motion sensing unit" he uses. The Office acknowledges that Wilson does not explicitly disclose a "inertial sensor," but considers this feature inherent. Applicants respectfully disagree with the Examiner's analysis. Even assuming that Wilson would have used in 1982 an "inertial sensor," what applicants deny, there is no indication that Wilson recognized the consequences of the use of such an inertial sensor. As noted above, the use of an inertial sensor results in a time delay due to the limited bandwidth of the inertial sensor, which requires compensation. In Wilson, a compensation for the resulting time interval is not mentioned. Not considering this time interval in the position correction, would result in a residual error, which might have been acceptable in 1982, but is not acceptable today.

For the reasons above, applicants submit that Wilson does not disclose all elements of the claimed invention as required for a rejection under 35 U.S.C. §102.

Applicants further note that when relying on the theory of inherency, the Office must provide a basis in fact and/or technical reasoning to reasonably support the determination that

the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art (MPEP §2112). The fact that a characteristic may be present in the prior art is not sufficient to establish inherency. Applicants submit that the Office did not meet its burden. In particular, the Office has not provided a single argument or a single piece of evidence why, for example, an inertial sensor (or its characteristics) necessarily flows from the teachings of Wilson's motion sensor unit (10). In fact, the Office did not even provide any argument or evidence why it may flow from the teachings of Wilson's motion sensor unit (10), though the latter, as discussed above, would not have been sufficient.

With regard to Claim 5, the Office took the position that Wilson's motion unit (10) sends an output signal which inherently has a time delay for travel to the interface unit (14).

In particular, the view was expressed that the following limitation of claim 5 is disclosed by Wilson:

"wherein said time interval for delaying considers the time delay by said inertial sensor as well as by scanning and computation time." (emphasis added)

Applicants submit that Wilson provides a throughout discussion of the "time delay" which he takes into consideration, for example, in the description of FIG. 2 and FIG. 3a and 3b. Those descriptions do not provide any indication that Wilson takes the delay by an inertial sensor into consideration. Rather, the absence of any reference to such a delay, forces the conclusion that Wilson does not take it

into consideration. This is consistent with the fact that in 1982 video technology and in particular the stabilization of images taken via video was not so advanced as to allow for a high-precision stabilization.

Accordingly, applicants submit that Wilson also does not disclose all the features set forth in claim 5.

Applicants respectfully request, that, if the Office maintains the above rejection, the Office show and explain where Wilson discloses expressly or by inherency a time delay by the inertial sensor. Applicants understanding of Wilson is that a "time delay" in Wilson occurs during processing steps that follow any activity by the inertial sensor.

In paragraphs 3 and 4, the Office rejected claims 4 and 11 as obvious over Wilson in view of the general knowledge in the art.

Applicants have outlined the deficiencies of Wilson with regard to claim 1 above. Applicants submit that the general knowledge in the art does not cure these deficiencies.

In particular, applicants submit that Wilson does not teach or suggest all the claim limitations as required for a *prima facie* case of obviousness for the reasons outlined above (MPEP §2142). Furthermore, applicants submit that there is no suggestion or motivation, either in Wilson or in the knowledge generally available to one of ordinary skill in the art, to modify the teachings of Wilson to arrive at the invention claimed in claims 4 and 11. Finally, applicants submit that there is no reasonable expectation of success.

Applicants have shown above that claims 1 and 8 are not

anticipated by Wilson. Separate arguments were provided to support the novelty of claim 5. Accordingly, rejected claims 2 to 3 and 5 to 6 as well as 8 to 10 and 12 to 13, which are directly or indirectly dependent on claims 1 and 8 should also be allowable. Applicants have also shown that claims 4 and 11 are not made obvious by Wilson in combination with the general knowledge in the art.

Applicants note with appreciation that claims 7 and 14 were found to be allowable. These claims were amended to include all limitations of the base claim and any intervening claims.

Reconsideration of the rejected claims is respectfully requested.

Respectfully submitted,



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